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United States Patent [19] Patton

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[54] **METHOD AND APPARATUS FOR
PHOTBLEACHING PATTERNS IN
IRRADIATED OPTICAL WAVEGUIDES**

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[52] U.S. Cl. **385/37; 359/569; 359/900**

[58] Field of Search 385/10, 37, 124,
385/129; 430/290, 321, 339; 359/569, 571,
572, 573, 563, 34, 130, 900

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[57] **ABSTRACT**

A method and apparatus for photobleaching predetermined patterns in an optical waveguide. The apparatus irradiates the optical waveguide generally held in a fixture. The irradiation includes a selected region or regions of the optical waveguide or the entire optical waveguide. The radiation interacts with radiation sensitive constituents in the optical waveguide to induce a light transmission loss. After the irradiation is completed, the optical waveguide is allowed to age whereby the light transmission recovers to an equilibrium less value. Light beams photobleach predetermined patterns into the previously irradiated region or regions. The patterns may take the form of Bragg gratings in the waveguide.

29 Claims, 3 Drawing Sheets

